2 Sheets—Sheet 1.

J. TYLER.

Rag-Washing Machine for Rag and Paper Washing Engines.

No. 216,585. **Patented June 17, 1879.**

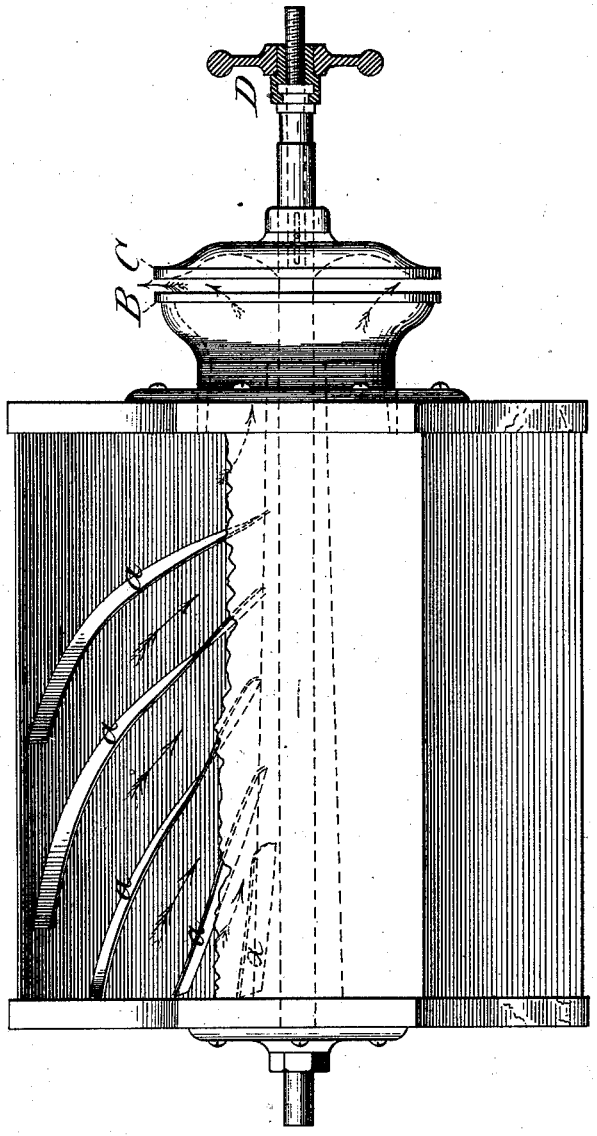

Fig. 1.

Attest:

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John Tyler

2 Sheets—Sheet 2.

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Fig. 2.

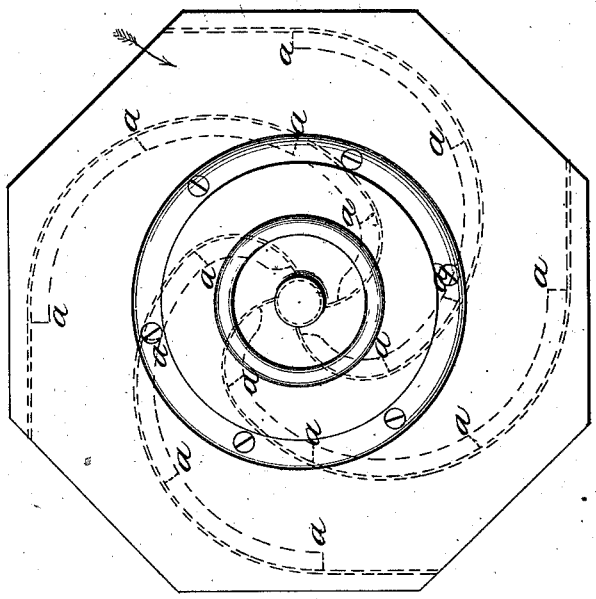
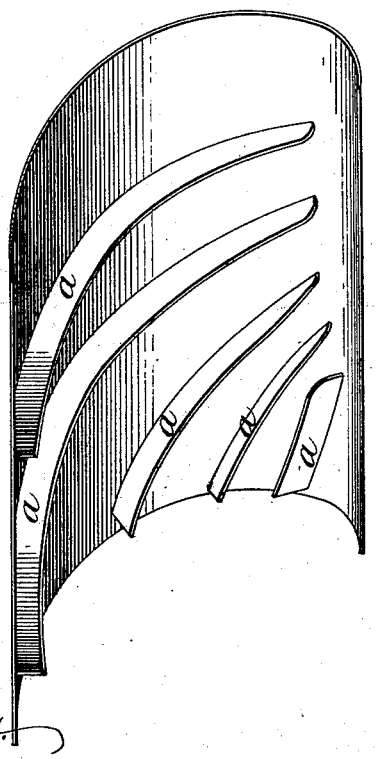


Fig. 3.



Attest:
Harry M. Carris
W. H. Drury

Inventor:
John Tyler

UNITED STATES PATENT OFFICE.

JOHN TYLER, OF CLAREMONT, NEW HAMPSHIRE.

IMPROVEMENT IN RAG-WASHING MACHINES FOR RAG AND PAPER WASHING ENGINES.

Specification forming part of Letters Patent No. **216,585**, dated June 17, 1879; application filed January 13, 1879.

To all whom it may concern:

Be it known that I, JOHN TYLER, of Claremont, in the county of Sullivan and State of New Hampshire, have invented new and useful Improvements in Rag-Washing Machines for Rag and Paper Washing Engines, with a regulated outlet, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to enable the paper-manufacturer to wash a greater quantity of material for the manufacture of paper in a given time, and perform the work in a superior manner. This is accomplished with scroll-shaped copper or metallic buckets, with a number of inclined wings or guides on the inside of said buckets, forcing the water through the cylinder to the outlet, thereby enabling the machine to be run at a high rate of speed, and discharging all the water from the cylinder before it passes the center.

The buckets are scroll-shaped, running from the center of the shaft to the circumference, and contain a number of graduated curved wings with varying angles toward the outlet of the washer, and when running at a high rate of speed the amount of water they discharge is thereby increased.

Figure 3 of the accompanying drawings is a perspective view of the bucket, with graduated and curved wings or guides to conduct the water to the outlet, (represented by letter *a*.) Fig. 1 represents a side view of the rag-washing machine for rag and paper washing engines, with graduated curved wings or guides with varying angles to conduct the water to the outlet, (the same as shown in Fig. 3, letter *a*.)

A shaft which drives the washer passes through the whole machine. The outlet (letter B) is bell-shaped, and so constructed as to allow the water to run free from the washer.

There is a movable concave head or gate, (letter C,) that slides on the shaft of the washer by means of a rod running in the center of the shaft, and fastened thereto, operated by a wheel and screw (letter D) on the end of the shaft, and the hub of the wheel is held in place by a groove in the shaft. This can be accomplished by a lever or other device; but the wheel and screw are preferred.

The object of the concave movable head (letter C) is to work in connection with the bell-shaped outlet, and to regulate the amount of water to be used, as in many cases there is not water enough to supply the washer at its full capacity and keep the rag-engine full of water.

This device keeps the water in the engine at all times at the right height, and may be constructed as a concave or a plane gate; but the concave head or gate is preferred.

The outside of the cylinder is covered with wire-cloth, through which the water is admitted into the washer, but excludes the paper material. By closing this outlet with the movable head or gate the washer is made tight, and the water clears the wire when it becomes clogged.

Fig. 2 is an end view, showing the scroll shape of the buckets with graduated and curved wings or guides attached. The outer end of the bucket is opposite the center of the shaft when it commences to run in the shape of a scroll; but varying this device does not impair its utility. The dotted lines represent the scroll-shaped bucket, with the ends of the wings or guides, (marked *a*.)

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The curved wings or guides on the inside of the bucket, substantially as set forth.

2. A rag-washing machine for rag and paper washing engines, with scroll-shaped buckets with one or more graduated and curved wings with varying angles running toward the center of the outlet, as represented in Fig. 1.

3. A movable head to a rag-washing machine for rag and paper washing engines, in combination with the outlet, substantially as and for the purpose described.

4. A gate attached to and sliding on a hollow cylinder with which to regulate the discharge of water from the washer, in combination with the outlet, substantially as and for the purpose described.

JOHN TYLER.

Witnesses:
HARRY M. CAVIS,
W. H. DRURY.